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(71) Applicant *(for all designated States except US)*: **MOBILE TELEPHONE NETWORKS (PROPRIETARY) LIMITED** [ZA/ZA]; 3 Alice Lane, Sandown Extension 38, 2196 Sandton (ZA).

(72) Inventors; and

(75) Inventors/Applicants *(for US only)*: **KAHN, Ari** [ZA/ZA]; 41 22nd Street, 2193 Parkhurst (ZA). **MOODLEY, Matthew, Colin** [ZA/ZA]; 46 Riverside Lodge, Waterford Estate, 2055 Fourways (ZA). **LOUW, Josias, Jacobus** [ZA/ZA]; 841 Horshoe Street, Little Falls, 1724 Roodepoort (ZA).

(74) Agents: **GILSON, David, Grant** et al.; Spoor and Fisher, P.O. Box 41312, 2024 Craighall (ZA).

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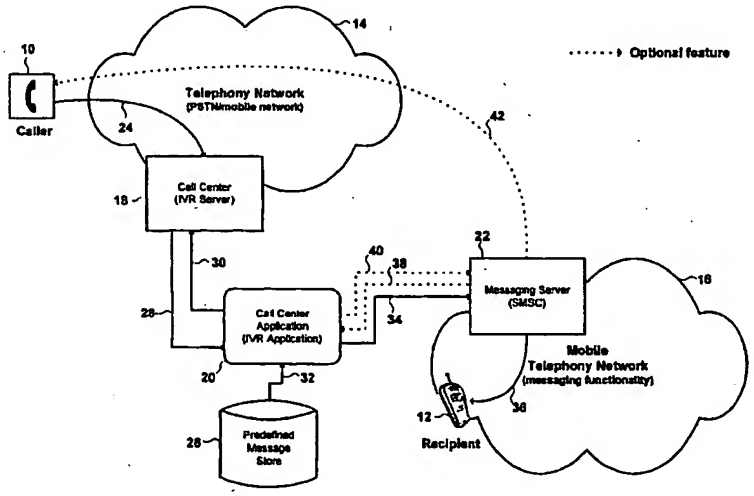
(54) Title: METHOD AND SYSTEM FOR SENDING A MESSAGE TO A RECIPIENT



(57) Abstract: A method and system for sending a message from a sender to a recipient are provided. The sender will typically use a convention or mobile telephone to dial one of several possible numbers, each of which includes a code which corresponds to a predetermined message. Effectively, the sender transmits a message request to a call center by dialing the chosen number. The code in the message request is associated with data corresponding to the required message and the data is transmitted to the recipient, who typically will be using a mobile telephone, as a text message in short message format. If the sender is known to the recipient data in the message, typically the telephone number of the sender, can be associated with data stored in the recipient's telephone, typically the name of the sender. Alternatively, the sender can access a website to associate such data with his/her telephone number for inclusion in the message sent to the recipient.

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METHOD AND SYSTEM FOR SENDING A MESSAGE TO A RECIPIENT

BACKGROUND OF THE INVENTION

This invention relates to a method of sending a message to a recipient and a system for implementing the method.

The ability of mobile telephones, typically GSM cellular telephones, to send and receive short text messages is an increasingly popular feature of these devices. When sending such a message from one mobile telephone to another, it is necessary for the sender to enter the message text via the telephone keypad, which can be somewhat laborious.

It is an object of the invention to provide an alternative method and system for sending such messages.

SUMMARY OF THE INVENTION

According to the invention there is provided a method of sending a message to a recipient, the method comprising:

storing at least one predetermined message;

associating a respective first code with said at least one message;

receiving a message request from a sender, the message request comprising a selected first code corresponding to a selected message and a second code identifying the recipient; and

transmitting data corresponding to the selected message to a terminal of the recipient.

The message request is preferably sent from a terminal of the sender.

The terminal of the sender may be a conventional telephone connected to a public switched telephony network or a mobile telephone connected to a mobile telephony network, for example.

The terminal of the recipient is preferably a mobile telephone, with the second code comprising the telephone number of the recipient's mobile telephone.

Preferably, a plurality of predetermined messages are stored, each having a respective different first code associated therewith.

The message request may comprise data transmitted from a GSM handset, or DTMF or other telephonic signals, used to dial a call center which is responsive to the first codes.

The plurality of stored messages may be stored on a server at a short message center which is responsive to signals from the call center to transmit the selected message in SMS format to the terminal of the recipient.

The method may include associating data stored in the recipient's terminal with the transmitted data corresponding to the selected message, and displaying the associated data on a display of the recipient's terminal.

The stored data that is associated with the transmitted data preferably comprises the name of the sender.

Alternatively, the method may include storing details of the sender associated with the telephone number of the sender's terminal on the server at the short message center, and including said details in the data transmitted to the recipient.

The details will typically comprise the name of the sender.

Further according to the invention there is provided a system for sending a message to a recipient, the system comprising:

> a call center arranged to receive a message request from a sender on one of a plurality of telephone numbers, the message request comprising a selected first code corresponding to a selected predetermined message and a second code identifying the intended recipient of the message; and

a messaging device responsive to a signal from the call center to transmit a selected predetermined message, corresponding to the selected first code in the message request, to a recipient.

The call center preferably has an associated call center application and a database of predefined messages, the call center application being arranged to retrieve data corresponding to the selected predetermined message from the database and to transmit the retrieved data to the messaging device.

The messaging device may be a short message center (SMSC) arranged to send the message to the recipient in short message (SMS) format.

Preferably, the messaging device is adapted to receive a confirmatory signal from a terminal of the recipient, confirming receipt of the message, and to transmit a further confirmatory signal to the sender, confirming successful receipt of the message by the recipient.

The system may include a website operable to receive details of the sender associated with the telephone number of the sender's terminal, and to transmit said details for storage and selective inclusion in data transmitted to the recipient.

The details preferably comprise the name of the sender.

BRIEF DESCRIPTION OF THE DRAWING

The drawing is a simplified block diagram showing the main components and method steps in a system and method for sending messages to a recipient according to the invention.

DESCRIPTION OF AN EMBODIMENT

The present invention makes it possible for a caller or message sender to send a text message to a recipient in a quick and convenient way. In a nutshell, the sender selects a number to dial from a "menu" of numbers, each corresponding to a predetermined short message stored centrally, and the selected message is then transmitted by a message center to a mobile telephone of the recipient. The need for the sender to laboriously enter the message text on his/her telephone is obviated.

In the simplified diagram of the single Figure, a caller 10 is shown schematically, together with a recipient 12. The caller 10 uses a terminal connected to a telephony network 14. The caller 10 will typically be using a mobile telephone such as a GSM cellular telephone connected to a mobile/cellular telephone network, or a conventional telephone connected to the public switched telephone network (PSTN). The caller can send a message to the recipient 12, who has a mobile telephone or similar terminal connected to a mobile/cellular telephone network 16, via the system of the invention which comprises a call center 18, a call center application 20 and a messaging server 22. The call center 18 typically comprises a telephony server or an interactive voice response (IVR) center that can be contacted by dialing (24) one of several predetermined numbers via the network 14.

The predetermined numbers comprise a local code or area code identifying the network or sub-network on which the call center is located, a first three digit code which corresponds to a predetermined message, and the mobile telephone number of the recipient 12. (It will be understood that the three digit code could comprise more or fewer digits – as few as one, and as many as necessary, depending on the number of different messages available.)

As indicated by the examples below, the predetermined messages will typically be frequently used messages, which can be identified by suitable research. In a refinement of the invention, the frequency with which different messages are used can be identified, and easy to remember codes can be allocated to those messages which are used most frequently.

Examples:

Dialed number	Message
083 123 083 222 1917	Phone me on my office number
083 456 083 222 1917	I have reached home safely
083 678 083 222 1917	Phone battery almost dead, phone me on home number
083 911 083 222 1917	Home alarm went off call armed response!
083 912 083 222 1917	Phone card money not enough phone me back

An example of the format of the received message as displayed on the recipient's mobile telephone screen is as follows:

"Message from 083 123 4567

Call me back"

The number dialed by the caller 10 effectively amounts to a message request, which identifies both the desired message from a predefined message store or database 26 and the recipient 12 to whom the message must be sent. The call is controlled by the telephony server application 20, using control signals 28 and 30 between the telephony server of the call center 18 and the call center application 20. The call center application 20 identifies and retrieves (32) the

requested message from the relevant code in the message request, formats it and forwards it (34) in the correct data format to the messaging server 22 for delivery to the recipient's mobile device.

The messaging server 22 typically is a short message service center (SMSC) connected to the mobile telephony network 16. The recipient 12 can be connected to the same mobile telephony network 16 or any other telephony network that is interconnected to the mobile telephony network 16, which is hosting the messaging server 22. The messaging server 22 uses signals 36 to deliver the message to the mobile recipient 12, on whose mobile telephone the message is displayed like any other short message.

In some or all cases, depending on the nature of the message, the message text includes the telephone number of the caller 10 (extracted from the message request by the call center 18) to enable the recipient 12 to respond.

Where the caller 10 is not utilising a mobile telephone or is using a telephony network with no caller line identification and the call center 22 comprises an IVR system, the system can prompt the caller 10 to enter his or her number via the keypad of a DTMF phone.

In a refinement of the system, means could be provided for allowing callers to personalise their messages by associating a name or other text with their telephone number. For example, a website can be provided which is accessible by users, who can enter their telephone number and an associated name. The call center application 20 would access a database associated with the website and add the name (or other text) to the message in place of, or in addition to, the caller's number.

Where the caller is known to the recipient, the telephone number of the caller can be associated with the corresponding number in the address book of the

recipient's mobile telephone, thus personalising the message. Thus, instead of the message commencing:

"Message from 083 123 4567" the message might say:

"Message from John"

As an optional feature and when supported by the original caller 10 and the telephony network 14, the messaging server 22 can notify (38) the call center application 20 about the delivery status of the message. In turn the call center application can compile a corresponding notification message to the caller 10 and forward it (40) to the messaging server 22 for delivery (42) to the caller 10 via the caller's hosting telephony network 14. Assuming that the caller is utilising a mobile handset, the confirmation message to the caller can also comprise a text message in short message (SMS) format. In the case of a caller 10 utilising a conventional telephone via the public switched telephone network, the confirmation message to the caller can comprise a predetermined recorded message or a fax, or can be dispensed with.

It will be appreciated that the above described method and system can be implemented using existing technology, and provides a convenient and useful service both to existing subscribers of a cellular network and also to third parties who wish to contact such subscribers.

CLAIMS

1. A method of sending a message to a recipient, the method comprising:

storing at least one predetermined message;

associating a respective first code with said at least one message;

receiving a message request from a sender, the message request comprising a selected first code corresponding to a selected message and a second code identifying the recipient; and

transmitting data corresponding to the selected message to a terminal of the recipient.

2. A method according to claim 1 wherein the message request is sent from a terminal of the sender.

3. A method according to claim 2 wherein the terminal of the sender is a conventional telephone connected to a public switched telephony network.

4. A method according to claim 2 wherein the terminal of the sender is a mobile telephone connected to a mobile telephony network.

5. A method according to any one of claims 1 to 4 wherein the terminal of the recipient is a mobile telephone, and the second code comprises the telephone number of the recipient's mobile telephone.

6. A method according to any one of claims 1 to 5 wherein a plurality of predetermined messages are stored, each having a respective different first code associated therewith.

7. A method according to any one of claims 1 to 6 wherein the message request comprises data transmitted from a GSM handset, or DTMF or other telephonic signals, used to dial a call center which is responsive to the first codes.

8. A method according to claim 7 wherein the plurality of stored messages are stored on a server which is responsive to signals from the call center to transmit the selected message in SMS format to the terminal of the recipient.

9. A method according to any one of claims 1 to 8 including associating data stored in the recipient's terminal with the transmitted data corresponding to the selected message, and displaying the associated data on a display of the recipient's terminal.

10. A method according to claim 9 wherein the stored data that is associated with the transmitted data comprises the name of the sender.

11. A method according to any one of claims 1 to 8 including storing details of the sender associated with the telephone number of the sender's terminal, and including said details in the data transmitted to the recipient.

12. A method according to claim 11 wherein the details comprise the name of the sender.

13. A system for sending a message to a recipient, the system comprising:

a call center arranged to receive a message request from a sender on one of a plurality of telephone numbers, the message request comprising a selected first code corresponding to a selected predetermined message and a second code identifying the intended recipient of the message; and

a messaging device responsive to a signal from the call center to transmit a selected predetermined message, corresponding to the selected first code in the message request, to a recipient.

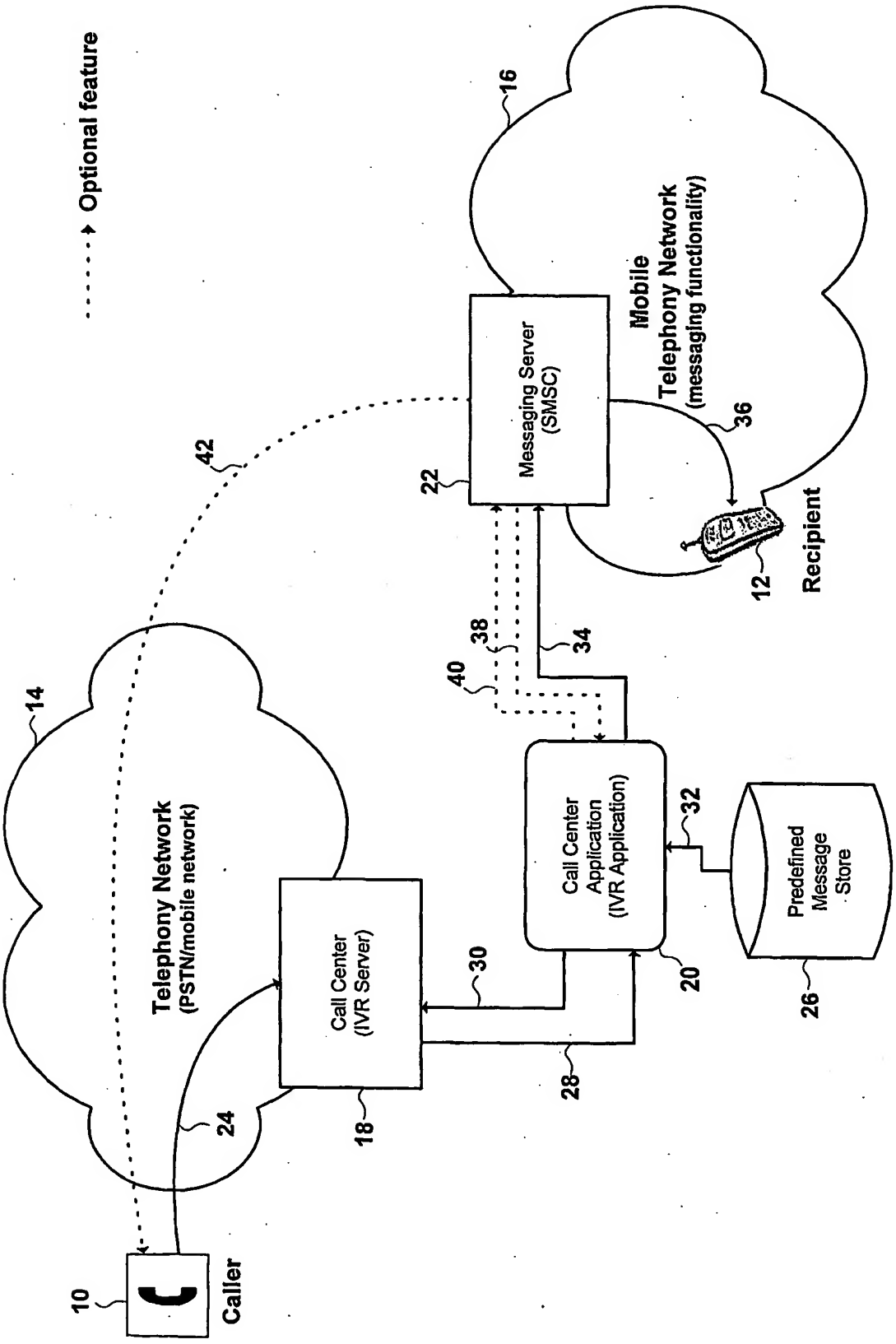
14. A system according to claim 13 wherein the call center has an associated call center application and a database of predefined messages, the call center application being arranged to retrieve data corresponding to the selected predetermined message from the database and to transmit the retrieved data to the messaging device.

15. A system according to claim 13 or claim 14 wherein the messaging device is a short message center (SMSC) arranged to send the message to the recipient in short message (SMS) format.

16. A system according to any one of claims 13 to 15 wherein the messaging device is adapted to receive a confirmatory signal from a terminal of the recipient, confirming receipt of the message, and to transmit a further confirmatory signal to the sender, confirming successful receipt of the message by the recipient.

17. A system according to any one of claims 13 to 16 including a website operable to receive details of the sender associated with the telephone number of the sender's terminal, and to transmit said details for storage and selective inclusion in data transmitted to the recipient.

18. A system according to claim 17 wherein the details comprise the name of the sender.


Optional feature
16
Mobile Telephony Network (messaging functionality)
Messaging Server (SMSC)
22
36
42
12
Recipient
38
40
34
14
Telephony Network (PSTN/mobile network)
Call Center Application (IVR Application)
32
Predefined Message Store
26
30
20
Call Center (IVR Server)
28
24
18
10
Caller

INTERNATIONAL SEARCH REPORT

International Application No
PCT/IB 02/00162

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 H04Q7/22

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 H04Q . G08B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)
EPO-Internal, WPI Data, PAJ, INSPEC

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6 009 308 A (MATSUURA TATSUYA) 28 December 1999 (1999-12-28) column 5, line 18-27	1,2,4-6, 9-13, 16-18
X	EP 0 821 536 A (LUCENT TECHNOLOGIES INC) 28 January 1998 (1998-01-28) column 2, line 14-58 column 4, line 52 -column 6, line 8	1-8, 13-16
X	WO 90 15511 A (MOTOROLA INC) 13 December 1990 (1990-12-13) page 51, line 10 -page 53, line 15	1-9,13, 14
X	WO 96 25826 A (NEXUS 1994 LTD) 22 August 1996 (1996-08-22) page 2, line 37 -page 3, line 11	1-6

☐ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

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Date of the actual completion of the international search	Date of mailing of the international search report
1 July 2002	08/07/2002

Name and mailing address of the ISA	Authorized officer
European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax (+31-70) 340-3016	Weinmiller, J

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INTERNATIONAL SEARCH REPORT

mation on patent family members

Inte nal Application No
PCT/IB 02/00162

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